

## THROMBECTOMY CATHETER AND SYSTEM

### ABSTRACT OF THE DISCLOSURE

5 Cross stream thrombectomy catheter and system for  
fragmentation and removal of thrombus or other material from  
blood vessels or other body cavities. High velocity saline  
jets emitted from a toroidal loop jet emanator or other jet  
emanator in a catheter distal end entrain fluid through inflow  
orifices, and with flow resistances create a back-pressure  
which drives cross stream streams through outflow orifices in  
10 a radial direction and thence radially and circumferentially  
to apply normal and drag forces on thrombotic deposits or  
lesions in the blood vessel or other body cavity, thereby  
breaking apart and transporting thrombus particles to be  
entrained through the inflow orifices, whereupon the high  
15 velocity jets macerate the thrombus particles which then  
transit an exhaust lumen or recirculate again via the outflow  
orifices.

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## PARTS LIST

10	cross stream thrombectomy catheter	38	distal end
10A	cross stream thrombectomy catheter	40	jet body
		41	lumen
11	threaded high pressure connection	42	exhaust lumen
		43	reduction
12	manifold	44	hypo-tube
14	hemostasis unit	45	polymeric tube
16	Luer fitting	46	toroidal loop jet emanator
18	manifold branch	48	marker coil
20	Luer connection	50	circular space
22	manifold branch	51	guidewire
24	Luer fitting	52	distal tip (of exhaust tube)
26	strain relief		
28	exhaust tube	54	closely wound portion
30	proximal end	56	loosely wound portion
32	outflow orifice	57	interior wall
34	inflow orifice	58	interior wall
36	tapered and flexible tip assembly	59	proximal area
		60a-n	jet orifices
37	tapered tube		

62	semi-toroidal loop jet emanator	87	extreme end
64a-n	jet orifices	88	outflow end
66	semi-circular space	89	necked-down portion
68	L-shaped jet emanator	90	distal end
70	jet orifice	91	J-shaped jet emanator
72	J-shaped jet emanator	92	tip
74a-n	jet orifices	93	housing
75	J-shaped jet emanator	94	bore
76	blood vessel	95	orifice member
77	jet orifice	96	U-shaped jet emanator
78	thrombotic deposit or lesion	98	jet orifice
79	extreme end	100	inflow orifice
80	high velocity jets	102	high velocity jet
81	J-shaped jet emanator	104	outflow orifice
82	cross stream jets	106	cross stream jet
83	jet orifice	108	tip
84	distal end	110	inflow orifice
85	orifice	112	curved surface
86	inflow end	114	distal end
		115	bore
		118	high velocity jet
		122	distal end

124	tip
126	bore
128	toroidal loop jet emanator
130a-n	jet orifices
132	inflow orifice
134a-n	high velocity jets
136	circular space
137	tube
138	distal end
140	jet body
142	jet
143	lumen
144	guidewire